

REMARKS:

This paper is herewith filed in response to the Examiner's Office Action mailed on July 9, 2009 for the above-captioned U.S. Patent Application. The above office action is a rejection of claims 1-22 and 24-30 of the application.

More specifically, the Examiner has objected to claims 8-13 and 15 because the language of the claims makes optional a step but does not require a step to be performed and does not limit the claim to a particular structure; rejected claims 1, 2, 8-9, 15-16, 19, and 24-25 under 35 USC 103(a) as being unpatentable over by Forssell (EP1006695) in view of Simard (US6,940,826) and Powers (US7,272,660); rejected claims 3 and 26 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard, Powers, and further in view of Upp (US2004/0002351); rejected claims 4-5, 10, 20-21, and 27-28 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard, Powers, and further in view of Lechleider (US6,058,109) and Rinchiuso (US2004/0196861); rejected claims 6, 11, and 29 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard, Powers, Lechleider, Rinchiuso and in further view of Schieder (EP1139613); rejected claims 7 and 30 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard, Powers, and further in view of Kajizaki (US2001/0055317); rejected claim 12 under 35 USC 103(a) as unpatentable over Forssell in view of Simard; rejected claim 13 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard and further in view of Upp; rejected claim 14 under 35 USC 103(a) as being unpatentable over Forssell, Simard, and further in view of Kajizaki; rejected claims 17-18 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard, Powers, and further in view of Schieder; and rejected claim 22 under 35 USC 103(a) as being unpatentable over Forssell in view of Simard. The Applicants respectfully disagree with the rejections.

Claims 1, 8, 12, 15, 22, and 24 have been amended for clarification. Claims 9-11, 13, and 16-21 have been amended accordingly. Support for the amendments can be found at least in paragraphs [0019]-[0020] and [0036]-[0037] of the published application. No new matter is added.

Regarding the objection to claims 8-13 and 15 the Applicants note that these claims have been amended to address the objection. The objection is seen to be overcome and the objections to claims 8-13 and 15 should be removed.

Regarding the rejection of claim 1 the Applicants disagree with the Examiner.

The Applicants note that, to further prosecution of the pending claims to an Allowance, the independent claims have been amended to recite in part a cellular communications network. The Applicants submit that an exemplary embodiment of the invention includes a cellular communications network where a wireless terminal receiving speech samples in a downlink can establish a new uplink utilizing a prolonged downlink. By utilizing the prolonged downlink the wireless terminal can establish the new uplink faster than is possible by utilizing establishment methods known in the art. This is desirable for at least the reason that one of ordinary skill in the art would understand that a long latency time in establishing an uplink can deteriorate intelligibility of speech in the uplink direction.

The Applicants submit that the cited references, either separately or together, do not disclose or suggest at least where claim 1 relates to transmitting "post-speech" packets to a plurality of downlinks responsive to a packet which indicates an end of speech samples (i.e. the utilized downlink will be soon disconnected).

The Applicants note that in the Office Action the Examiner admits: "Forssell fails to teach keeping up a dedicated channel downlink from a core network by sending post-speech packets for a time of duration." The Applicants submit that Forsell does not involve using post-speech packets at all.

The Applicants submit that Forsell does not address the same problems as those addressed with the exemplary embodiments of the invention as described in the instant application. For example, in Forsell establishing a new uplink is apparently not a problem because during establishing a downlink or an uplink it is simultaneously decided if a communications channel is needed to the

other transmission direction to or from the wireless terminal (page 8 lines 23-30 and page 8 line 53 to page 9 line 2). This ascertains that latency time is not long if a receiving terminal changes its role to a transmitting terminal because the uplink has been already reserved for the terminal. Therefore, the system of Forssell offers to both parties of the established connection a real-time full-duplex speech connection through a packet-switched radio network. Therefore, the Applicants submit that a one skilled in the art would not be motivated to modify the system of Forssell to transmit post-speech packets responsive to a packet indicating an end of speech samples from the uplink, as in claim 1.

The problem to be solved in Forssell is how a capacity limited radio channel of a packet switched wireless communications network (either downlink or uplink) can be shared with several separate users in the best way (page 10 line 54 to page 11 line 4). The idea disclosed in Forssell is that human speech is not continuous. In human speech there are always silent periods, for example between words. If during these silent periods the radio channel is reserved all the time to a "silent terminal," the wireless system loses limited radio transmission resources. For overcoming this defect in Forssell, a system is disclosed where these silent periods are allocated to other users until the "silent terminal" again begins its transmission (when, for example, a new word starts). In Forssell the silent terminal has always a priority to use the original radio channel. This ascertains that "the silent terminal" can again start its transmission without any latency time in the original transmission direction again. The "temporary channel user terminal" is simultaneously allocated to some other free radio channel.

Further, the Applicants note that in Forssell "the temporary channel user terminal" does not take part in the same session as "the silent terminal". Therefore, the depicted allocation procedure in Forssell does not at all relate to a connection where a silent period has been utilized.

The Applicants also note that the resource allocation system of Forssell, if needed, is utilized always independently in a downlink and/or an uplink of a cellular terminal. By doing so the radio resources of the cellular system are used optimally.

In the Office Action the Examiner submits that it would be desirable to add some "post speech packets" from the other cited references to the system of Forssell. The Applicant disagrees with the Examiner for at least the reasons below.

Firstly, any surplus data packets which would be added during or after the silent period would waste the limited radio transmission resources of Forssell. The Applicants submit that this is against the basic teachings of Forssell, where the goal is to offer all possible usable radio transmission resources to other user terminals of the same cellular network. The Applicants submit that one of ordinary skill in the art would not attempt to modify the radio resource allocation system of Forssell such that the modification would decrease the radio transmission capacity in the system of Forssell.

Secondly, in the system of Forssell there always exists knowledge about how long the silent (passive) period actually is. In Forssell, a value **N** (paragraphs [0051] and [0056]) defines how long the passive period will be. The transmitting terminal can independently define this value **N** which is transmitted to the network. Therefore, in Forssell there is a specific way to prolong or shorten the passive period if a need arises. It is also disclosed in Forssell that during a passive period the network assigns to the terminal, which is in the passive state, time slots now and then which the terminal can utilize for transmission of a message to the network. If the terminal wants to end or change the length of the passive period it transmits a message where it can define if the silent period continues, an active period will start, or temporary bit flow can be released (paragraphs [0067] - [0077]). The mobile terminal utilizes **CV'** and **TR** bits (paragraphs [0067] - [0069]) and the network utilizes a **FBI** indicator (paragraphs [0073] - [0075]) for informing the receiving party about the forthcoming condition.

Therefore, the Applicant cannot see any reason to use also an alternative way based on Simard or Powers to create silent periods.

Simard which relates to a wire-line teleconferencing only mentions that "empty packets" could be sent when "no talkers are selected". The "empty packets" are not sent responsive to an end-of-

speech packet (Column 9 lines 22-25). The selecting is done based on detecting if packets are incoming (Column 9 lines 1-10). Further, Simard only states that the empty packets are sent to "maintain packet transmission". This kind of action is typical in wire-line connections. However, this type of operation would waste radio transmission resources in the capacity limited transmission system of Forssell. If the system of Forssell would be used in a teleconferencing system "the empty packets" of Simard would deteriorate the operation of the wireless system of Forssell by decreasing available transmission resources.

Powers relates to a wire-line computer network disclosing Windows and PCs. The Applicant contends that it is not proper prior art to the present application because it is not in the same or neighboring technical field, at least not after the amendment of the independent claims to relate to a cellular communications network.

In the depicted system of Powers a web server periodically sends "a keep-alive" TCP/IP message to a client device for preventing a TCP/IP connection timeout. The Applicants submit that TCP/IP systems are not optimally used in applications where real-time properties of the communication connection are an important operational precondition. However, if the TCP/IP message of Powers would be used in the system of Forssell, though not agreed to as proper, then the result would be that transmission resources would be wasted in the capacity limited radio transmission system of Forssell.

The Applicant contends that in the system of Forssell, as similarly stated above, every time a data frame is transmitted the transmitting party can unambiguously define if a silent period is started, continued or stopped. And the transmitting party can also define the length of the next silent period. Any surplus data packets would deteriorate functioning of the system of Forssell. Therefore, the Applicant contends that a use of "any empty packets" of Simard or "keep-alive messages" of Powers are not needed in Forssell.

Further, the Applicants submit that the none of the other references cited, including Upp, Lechtleider, Rinchiuso, Schieder and Kajizaki, can be seen to overcome the shortfall of Forssell,

Simard or Powers as stated above.

The Applicants contend that, for at least the reasons stated, the references cited are not seen to disclose or suggest claim 1. Thus, the Examiner is respectfully requested to reconsider and remove the rejection.

In addition, the Applicants contend that for at least the reason that independent claims 8, 22, and 24 recite features similar to claim 1, the rejections of these claims is seen to be improper and the rejections should be removed.

Further, the Applicants submit that, for at least the reasons stated, the references cited can not be seen to disclose or suggest at least where independent claim 12 recites in part “at least one of recognize or transmit post-speech packets on a packet data channel responsive to a packet indicating an end of speech samples.” Thus, the rejection of claim 12 should be removed.

Additionally, the Applicants submit that, for at least the reasons stated, the references cited can not be seen to disclose or suggest at least where independent claim 15 recites in part “sending, responsive to a last speech packet from the sending terminal, post speech packets to the plurality of receiving terminals for a time of such duration that a new dedicated channel can be established utilizing said earlier dedicated channel.” Therefore, the rejection of claim 15 should be removed.

Further, it is respectfully submitted that all dependent claims 2-7, 9-11, 13-14, 16-21, and 25-30 are allowable due to their dependence on an allowable independent claim 1, 8, 12, 15, and 24, respectively.

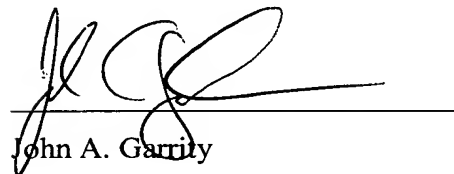
Further, the Applicants note that although the Applicants have not argued against all the rejection in the Office Action the Applicants do not acquiesce to the rejections.

Based on the above explanations and arguments, it is clear that the references cited cannot be seen to disclose or suggest claims 1-22 and 24-30. The Examiner is respectfully requested to

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reconsider and remove the rejections of claims 1-22 and 24-30 and to allow all of the pending claims 1-22 and 24-30 as now presented for examination. Should any unresolved issue remain, the Examiner is invited to call Applicants' representative at the telephone number indicated below.

Respectfully submitted:



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450.

Sept. 15, 2009
Date

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